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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,769	03/14/2002	Gerald Wojcik	2156-090A	4845
7590	11/17/2003			EXAMINER OLTMANS, ANDREW L
Arthur G. Schaier Carmody & Torrance LLP 50 Leavenworth Street P.O. Box 1110 Waterbury, CT 06721-1110			ART UNIT 1742	PAPER NUMBER
DATE MAILED: 11/17/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

5

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/099,769	WOJCIK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew L Oltmans	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 August 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,5,7-25,28,30-38 and 41-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 44-57 is/are allowed.
- 6) Claim(s) 1,2,5,7-14, 16-25,28,30-37 and 41-43 is/are rejected.
- 7) Claim(s) 15 and 38 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### *Status of the Claims*

1. Claims 1-2, 5, 7-25, 28, 30-38 and 41-57 remain pending in this application. In view of applicant's amendments, the rejections under 35 USC 102(b) made in the previous Office Action have been withdrawn and rejections under 35 USC 103(a) have been made. In view of newly discovered reference Kresge et al. 5,902,767, rejections under 35 USC 102(b) and 103(a) have been made. In view of the new grounds for rejection, this Office Action is NON-FINAL.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Kresge et al. 5,902,767***

3. Claims 24-25, 28, 33 and 42-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Kresge et al. 5,902,767 (Kresge).

Kresge teaches a composition comprising a source of meta-tungstate ions, including ammonium meta-tungstate, a soluble material comprising zirconium, including zirconium nitrate (col 3, lines 62-63), and ammonium hydroxide, wherein the composition is free of chromium, and has at least one additives, including a pH adjusting agent, as instantly recited in claims 24-25, 28, 33 and 42-43 (col 10):

**Example 4**

20 Five hundred grams of ZrOCl<sub>2</sub>·8H<sub>2</sub>O were dissolved with stirring in 6.5 liters of distilled water. To this solution was added a mixture of 500 grams of distilled water and 7.5 grams of FeSO<sub>4</sub>·7H<sub>2</sub>O. Finally a solution containing 263 grams of concentrated NH<sub>4</sub>OH, 500 ml of distilled H<sub>2</sub>O, and 25 54 grams of (NH<sub>4</sub>)<sub>2</sub>H<sub>2</sub>W<sub>12</sub>O<sub>42</sub>·xH<sub>2</sub>O was added dropwise to the iron/zirconium solution over a 30–45 minute period. The pH of the final composite was adjusted to approximately 9 by the addition of concentrated ammonium hydroxide. The

The claims do not distinguish over the teachings of Kresge.

It is noted that the recitation of “conversion coating composition” in the preamble of claim 24 does not distinguish over the teachings of Kresge because. The recitation “conversion coating composition” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1742

***Wada et al. 6,193,815 B1***

5. Claims 1-2, 5, 7-14, 16-19, 21-25, 28, 30-36 and 41-43 are rejected under 35

U.S.C. 103(a) as being unpatentable over Wada et al. 6,193,815 (Wada).

Wada teaches a conversion coating composition and the method of using the conversion coating composition to form a conversion coating, wherein the composition is free of Cr as recited in claims 1, 21, 24 and 42 (abstract and col 2, lines 36-41). Wada teaches that the solution may include zirconium in the amount instantly claimed, as recited in claims 1, 10-13, 24 and 33-36 (col 4):

35 The source of fluoride in the composition and surface treatment bath according to the present invention can be such fluorine-containing acids as hydrofluoric acid (i.e., HF), fluotitanic acid (i.e.,  $H_2TiF_6$ ), fluosilicic acid (i.e.,  $H_2SiF_6$ ), and fluozirconic acid (i.e.,  $H_2ZrF_6$ ), as well as any  
40 of their neutral and acid salts, but again the selection of the fluoride is not critical. The fluoride content in the surface treatment bath should be in the range from 0.010 to 12 g/L, preferably is from 0.050 to 5.0 g/L, and more preferably is from 0.10 to 3.0 g/L, in each case calculated as fluorine.

[emphasis added by examiner]

Wada teaches that the solution may include tungstate (encompassing the types of tungstates recited in claim 2 and 5) in the amount instantly claimed, as recited in claims 1, 5, 7-9 (col 4):

and strongly paint-adherent coating. The accelerator concentration in the surface treatment bath must be in the range  
(col 5):

from 0.010 to 2.0 g/L, and is preferably in the range from 0.10 to 1.1 g/L. No acceleration of the film-forming reaction

(col 5):

Art Unit: 1742

The tungstic acid/tungstate source is not critical as long as it is water-soluble; however, again the use of the sodium salt (i.e.,  $\text{Na}_2\text{WO}_4$ ) or potassium salt (i.e.,  $\text{K}_2\text{WO}_4$ ) of tungstic acid is preferred because of their relatively low cost.

[emphasis added by examiner]

Wada teaches the temperature, the additives, the application steps and the cleaning steps recited in claims 2, 16-17, 19, 22-23, 25 and 43 (col 5, lines 50-65; col 6, lines 5-19; col 7, lines 5-34). Wada teaches the following pH, which overlaps the pH recited in claims 18 and 41 (col 5):

tion. It becomes very problematic to obtain a highly corrosion-resistant and strongly paint-adherent coating at a pH in excess of 4.5. The more preferred pH range is 1.3 to 3.0. The pH of the surface treatment bath according to the present invention can be adjusted by adding an acid, e.g., 50 nitric acid, sulfuric acid, hydrofluoric acid, or the like to lower the pH, or by adding an alkali, e.g., sodium hydroxide, sodium carbonate, ammonium hydroxide, or the like to raise the pH.

Wada fails to meet all the limitations of the instant claims in that Wada does not explicitly teach an embodiment having *meta*-tungstate or the pH range recited in instant claims 18 and 41.

With respect to the particular tungstate (i.e. meta-tungstate), the teaching of Wada renders the particular configuration claimed, meta-tungstate, obvious (see e.g. col 5, line 21-25). The various configurations of tungstate are genus to the particular meta- configuration claimed. The species meta-tungstate is obvious because the genus tungstate is small and limited, the Wada reference teaches that the particular source of tungstate is not critical, the tungstates are all similar in structure, since all are forms of tungstate, the tungstates are used for similar

Art Unit: 1742

applications, namely coating additives, and wherein the coating art is a predictable art, see MPEP 2144.08 (II) (A). As evidence of the obviousness of the role of the particular tungstate as a coating additive, the examiner points to Nikaido et al. 3,963,568 wherein the coating additive tungstate is shown to have similar structure, similar use and is part of a small genus of tungstates (col 3, lines 33-45).

With respect to pH, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the pH taught by the reference overlaps that of the instant claims, In re Peterson, 65 USPQ2d 1379, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

***Dolan 5,449,415***

6. Claims 1-2, 5, 7-14, 16-24, 28, 30-37 and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan 5,449,415 (Dolan).

Dolan teaches a conversion coating composition and the method of using the conversion coating composition to form a conversion coating, wherein the composition is free of Cr as recited in claims 1, 21, 24 and 42 (abstract; col 1, lines 24-31). ~~Wada~~ teaches that the solution may include zirconium in the amount instantly claimed, as recited in claims 1, 10-13, 24 and 33-36 (col 12):

Art Unit: 1742

40 (A) at least about 0.15M/kg of a component of fluorometallate anions, each of said anions consisting of  
(i) at least four fluorine atoms, (ii) at least one atom  
of an element selected from the group consisting of  
titanium, zirconium, hafnium, silicon, aluminum,  
45 and boron, and, optionally, one or more of (iii)  
ionizable hydrogen atoms and (iv) oxygen atoms;  
(B) a component of divalent or tetravalent cations of  
elements selected from the group consisting of  
cobalt, magnesium, manganese, zinc, nickel, tin,  
50 copper, zirconium, iron, and strontium in such an  
amount that the ratio of the total number of cations  
of this component to the number of anions in com-  
ponent (A) is at least about 1:5 but not greater than  
about 3:1;

[emphasis added by examiner]

Dolan teaches that the solution may include tungstate (encompassing the types of tungstates recited in claim 2 and 5) in the amount instantly claimed, as recited in claims 1, 5, 7-9 (col 13):

2. A composition according to claim 1, which also includes a component (G) selected from the group consisting of tungstate, molybdate, silicotungstate, and silicomolybdate anions in an amount such that the ratio of the total moles of tungsten and molybdenum in the 5 composition to the total moles of titanium, zirconium, hafnium, silicon, aluminum, and boron in component (A) is not less than about 0.03 and which optionally also includes one or both of a component (F) of dissolved

[emphasis added by examiner]

Dolan teaches the temperature, the additives, the application steps, the deoxidation (i.e. acid cleaning) steps and the cleaning steps recited in claims 16-17, 19-20, 22-23 and 43 (col 5, line 41 to col 6, line 39; col 7, lines 10-11 and 28-31 and 48-51; col 8, lines 3-8). Dolan teaches that

Art Unit: 1742

soluble aluminum compounds may be added, as recited in claims 14 and 37 (col 2, line 19).

Dolan teaches the following pH, which overlaps the pH recited in claims 18 and 41 (col 2):

**working composition a pH value that is, with increasing preference in the order given, not less than 0.5, 1.0, 1.3, 1.7, 1.8, 1.9, or 2.0 and independently is, with increasing preference in the order given, not more than 6.7, 6.0, 5.5, 5.0, 4.5, 4.0, 3.8, 3.7, 3.6, or 3.5; and, optionally, one or more of:**

Dolan fails to meet all the limitations of the instant claims in that Dolan does not explicitly teach an embodiment having *meta*-tungstate or the pH range recited in instant claims 18 and 41.

With respect to the particular tungstate (i.e. *meta*-tungstate), the teaching of Dolan renders the particular configuration claimed, *meta*-tungstate, obvious (see e.g. col 13, line 3). The various configurations of tungstate are genus to the particular *meta*- configuration claimed. The species *meta*-tungstate is obvious because the genus tungstate is small and limited, the tungstates are all similar in structure, since all are forms of tungstate, the tungstates are used for similar applications, namely coating additives, and wherein the coating art is a predictable art, see MPEP 2144.08 (II) (A). As evidence of the obviousness of the role of the particular tungstate as a coating additive, the examiner points to Nikaido et al. 3,963,568 wherein the coating additive tungstate (including *meta*-tungstate) is shown to have similar structure, similar use and is part of a small genus of tungstates (col 3, lines 33-45).

With respect to pH, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the pH taught by the

reference overlaps that of the instant claims, In re Peterson, 65 USPQ2d 1379, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

***Allowable Subject Matter***

7. Claims 44-50 (method) and 51-57 (composition) are allowed.
8. Claims 15 (method) and 38 (composition) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

A primary reason for the allowance of claims 15 and 38, under the above conditions, and claim 44-57 is that the prior art fails to teach or suggest, either alone or in combination, the instantly claimed compositional range of soluble aluminum in the composition and the method of using the composition, as instantly claimed.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 703-308-2594. The examiner can normally be reached from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Andrew L. Oltmans  
Patent Examiner  
Art Unit 1742

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November 13, 2003